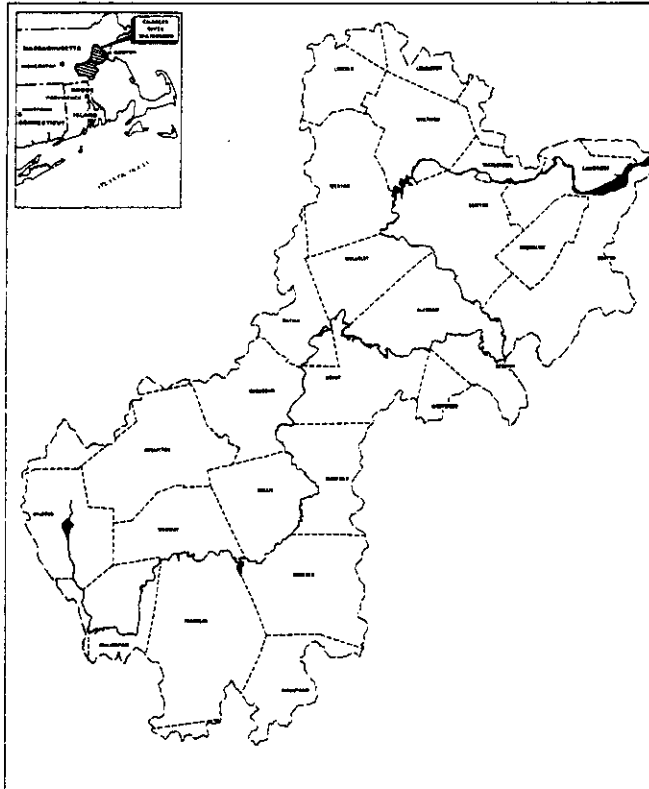


**WATER RESOURCES DEVELOPMENT PROJECT
CHARLES RIVER WATERSHED**



***NATURAL VALLEY STORAGE AREAS
MASSACHUSETTS***

DESIGN MEMORANDUM NO. 3B

REAL ESTATE



***DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASS.***

JULY 1978



DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02154

REPLY TO
ATTENTION OF

NEDRE-A

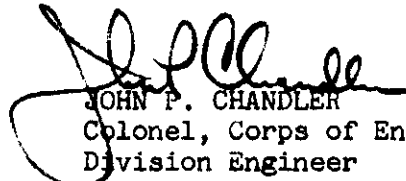
21 July 1978

SUBJECT: Charles River Watershed, Natural Valley Storage Areas,
Massachusetts, Design Memorandum No. 3B, Real Estate

HQDA (DAEN-REA-P)
WASH DC 20314

1. The General Design Memorandum for the subject project was submitted on 29 July 1976, and approved on 3 September 1976.
2. There is submitted herewith for review and approval five copies of Design Memorandum No. 3B, Real Estate, and the separate formal Gross Appraisal. This is the third of four reports covering the lands and interests required for acquisition in conjunction with the Charles River Watershed, Natural Valley Storage Area Project.
3. REDM No. 3, the first in a series of four reports was submitted on 21 October 1976, and approved on 3 December 1976. Acquisition of the lands covered by that report commenced in May 1977 and is well underway. REDM No. 3A, the second in the series of four reports was submitted on 19 May 1978, and approved on 31 May 1978. Acquisition of the lands covered by that report will commence in October 1978.
4. The estimated total land requirements covered under this report are approximately 2,095 acres, involving about 146 owner-ships at an estimated cost of \$1,800,000.
5. It is recommended that the subject Memorandum be approved and this office authorized to proceed with the acquisition program outlined herein.

2 Incls (quint)
as


JOHN P. CHANDLER
Colonel, Corps of Engineers
Division Engineer

WATER RESOURCES DEVELOPMENT PROJECT

CHARLES RIVER WATERSHED
NATURAL VALLEY STORAGE AREAS
MASSACHUSETTS

DESIGN MEMORANDUM NO. 3B

REAL ESTATE

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
WALTHAM, MASSACHUSETTS

JULY 1978

DESIGN MEMORANDUM
REAL ESTATE

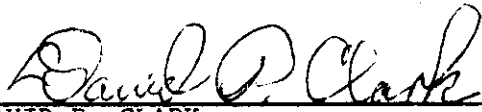
CHARLES RIVER WATERSHED
NATURAL VALLEY STORAGE AREAS
MASSACHUSETTS

JULY 1978

This Real Estate Design Memorandum has been prepared in accordance with regulations set forth in ER 405-2-150, dated 11 February 1966, as amended.

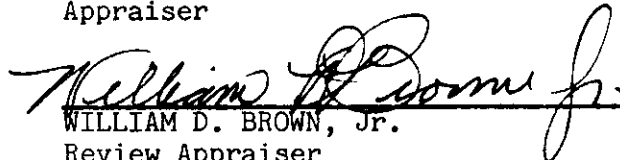
I hereby certify that I have examined the properties described and the estimates, as developed in this report, represent my unbiased judgements of the interests required, subject only to assumptions and limitations as specifically set forth herein.

PREPARED BY:



DAVID P. CLARK
Appraiser


REVIEWED BY:



WILLIAM D. BROWN, Jr.
Review Appraiser


APPROVAL AND CERTIFICATION

The undersigned herewith approves this Real Estate Design Memorandum and certifies that he has inspected the lands proposed for acquisition within the Project area and comparable property in the vicinity and that data set forth herein is accurate and complete to the best of his knowledge.



WILLIAM R. COKE
Chief, Appraisal Branch

APPROVED FOR THE DIVISION ENGINEER:



M. S. PHILLIPS
Chief, Real Estate Division

WATER RESOURCES DEVELOPMENT PROJECT

CHARLES RIVER WATERSHED
NATURAL VALLEY STORAGE AREAS
EASTERN MASSACHUSETTS

DESIGN MEMORANDA INDEX

<u>Number</u>		<u>Scheduled Submission Date</u>	<u>Date Submitted</u>	<u>Date Approved</u>
1	Hydrologic Analysis Final	Aug 76	4 Oct 76	11 Nov 76
2	GDM - Phase I & Phase II Combined	Jul 76	29 Jul 76	3 Sept 76
	Real Estate			
3	Priority 1	Sept 76	21 Oct 76	3 Dec 76
3A	Priority 2	Mar 78	19 May 78	31 May 78
3B	Priority 3	Jun 78		
3C	Priority 4	Mar 79		
	Master Plan: Envi- ronmental Analysis, Fish & Wildlife Recreation Facilities			
	Area G	Aug 78		
	All Areas	Apr 79		

DESIGN MEMORANDUM NO. 3B
REAL ESTATE

CHARLES RIVER WATERSHED
NATURAL VALLEY STORAGE AREAS
MASSACHUSETTS

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1. PROJECT DESIGNATION AND AUTHORIZATION

This project is designated as Charles River Watershed, which was authorized by Water Resources Development Act of 1974, Section 2 of Public Law 93-251, dated 7 March 1974. The document of authorization, which is the basis for acquisition of the Natural Valley Storage Areas, reads in part as follows:

"CHARLES RIVER WATERSHED

The project for flood control and other purposes in the Charles River Watershed, Massachusetts: Report of the Chief of Engineers, dated December 6, 1972...."

2. SCOPE

Because the 17 areas of the land acquisition program are considerably spread out, it was deemed necessary to prepare four separate Real Estate Design Memoranda. The first of the four reports entitled "Design Memorandum No. 3 Real Estate" was completed and submitted to OCE in October 1976 and approved by 1st Indorsement dated 3 December 1976. The second report, designated REDM 3A, was submitted in May 1978 and was approved by 1st Indorsement dated 31 May 1978. This report, the third in the series of four reports, is designated Design Memorandum No. 3B and covers six of the 17 storage areas in the Charles River Watershed.

Acquisition of the first lands covered by REDM No. 3 commenced in May 1977 and is now well underway. One hundred sixteen tracts have been acquired as of 12 July 1978, with 96 tracts acquired in fee and 20 tracts by restrictive easement. Questionnaire comments returned from landowners, concerning their dealings with the Corps, have been favorable.

3. HISTORY

The Charles River rises in Hopkinton about 30 miles southwest of Boston and flows in an 80-mile meandering course to Boston Harbor. In 1965 the Congress directed the U. S. Army, Corps of Engineers, to undertake a study of the resources of the Charles River Watershed with a particular emphasis on how to control flood damages in the urbanized lower watershed and head off any significant flood damages in the urbanized Middle and Upper Watershed. A 1968 interim recommendation led to authorization of a new Charles River Dam near the mouth of the River in Boston Harbor. The dam is now completed and dedication ceremonies were conducted on 24 May 1978.

The reservoir created by this dam, which is situated in the lower Charles River near Boston proper, has a negligible effect on the Middle and Upper Natural Valley Storage areas. The new dam replaces the old Charles River Dam, which is situated one half mile upstream.

In 1972 the Corps issued its final report for the Upper and Middle watersheds, which included a new direction in flood damage prevention. The studies showed that the marshes and swamps along the Charles River acted to modify and desynchronize flood flows in a manner similar to a series of reservoirs to protect downstream areas from serious damage. It was shown that the loss of these natural valley storage areas, through continued urbanization in the Charles River Watershed, could result in widespread downstream damages. Positive measures were found necessary to assure that future flood loss potential is kept to a minimum. It was recommended in the report that the Government provide for Federal acquisition and perpetual protection of 17 crucial natural valley storage areas, totaling about 8,500 acres of wetlands.

4. PROJECT PURPOSE

Of the methods available for flood damage prevention Federal acquisition of regionally significant natural valley storage areas offers an economical and efficient approach to flood control. The project provides for Federal ownership and perpetual protection of 17 critical natural valley storage areas, located in the Middle and Upper Watershed of the Charles River. The project is nonstructural and is unique in that it is the first of its type to be authorized and funded for acquisition.

The plan is compatible and complementary to local and State flood management actions. Continuing urbanization would displace the wetlands and without the storage they afford, flooding would become an increasingly serious problem. Therefore, the purpose of this ongoing land acquisition program is to preserve the marshes, swamps, and wetlands in their present state as natural flood water detention areas needed to reduce future flood losses and to safeguard natural open space.

The United States Department of the Interior, Fish and Wildlife Service, commends and supports the U. S. Army, Corps of Engineers, for the plan of acquisition. Also, the Governor of the Commonwealth of Massachusetts has endorsed this natural valley storage plan. The Charles River Watershed Association is also supportive of the plan and is assisting in publicizing the project.

5. LOCAL COOPERATION - ASSURANCES

The Charles River Watershed Project in eastern Massachusetts provides for Federal acquisition of natural valley wetlands, principally for the benefit of downstream communities. The recommendations of the authorized Project were that local interests will:

- a. Prevent modification or alteration of existing roadways, utilities, bridges, culverts and any other improvements that might affect the drainage characteristics of the natural storage areas;
- b. Adopt and enforce regulations to restrict development of flood plain lands;
- c. Operate and maintain the existing dams along the Charles River.

Agreements for local cooperation were forwarded to the Commonwealth of Massachusetts for signature prior to commencement of land acquisition, as required by Section 2 of Public Law 93-251 of 7 March 1974, in compliance with section 221 of Public Law 91-611 on 31 December 1970. These assurances were executed by the Commonwealth of Massachusetts on 7 March 1977, after which a public meeting was held and land acquisition began.

Consent legislation was enacted by the Commonwealth of Massachusetts Acts and Resolves, approved December 23, 1977. The Act granted the consent of the Commonwealth to the acquisition by the United States of land for the Charles River Natural Valley Storage Project and authorized the Water Resources Commission to establish encroachment lines and flood plain zones. It further authorized the Department of Environmental Quality Engineering to issue or deny an order of conditions for placement of an obstruction or encroachment within the flood plain zone, after the Water Resources Commission has established same.

6. PRIORITY GROUP NO. III

Specifically set forth in this report are the area descriptions and the Real Estate Cost Summary of six of the 17 areas that make up Priority Group III. They are identified as Areas "M", "N", "O", "P", "R", and "S" in the Upper Charles Drainage area, containing a total of about 2095 acres in the towns of Franklin, Wrentham, Holliston, Medway, and Bellingham. The areas are about 20 - 25 miles southwest of Boston and are accessible by several primary highways from downtown Boston. These areas were assigned third

priority, because of their location near the headwaters of the Charles, their large holding capacity and the ultimate threat of development upon the wetlands within these six areas. These areas contribute about 24 percent of the entire watershed area to be acquired. They comprise a vital component for the natural valley water impoundment phenomenon. (Refer to Plate 3B-2) Previous reports approved acquisition of Priority Group No. I, Areas "G", "H", "K", and "L", and Priority Group No. II, Areas "B", "C", "D", and "E".

7. PROJECT LAND REQUIREMENTS

The lands required to implement this flood protection program are the low and wetlands surrounding the banks of the Charles River and its tributaries. The total area, estimated by the Corps hydrologists to be necessary for the entire project, is about 8,500 acres. The project involves about 500 ownerships. (Refer to Plate 3B-1)

The guide taking lines for lands to be acquired have been delineated by using various elevations above mean sea level, based upon the 1955 flood level plus one (1) foot or two (2) feet, depending upon the topography of the individual area. Lands below these levels for each area are included in the acquisition requirement. The following guidelines will be observed in determining the extent of land acquisition:

- a. In general it is planned that most acquisitions will be by outright purchase.
- b. No improvements are to be taken.
- c. Restrictive easements will be acquired in certain areas.
- d. There will be no taking which would leave a non-conforming status, on ownerships where portions of land are acquired.
- e. On rear yards of improved lots, where only small areas are below the guide taking line, there will be no acquisition, the assumption being that such small areas would not contribute significantly to the project requirements.
- f. Borderline cases will be examined on an individual tract basis and a determination will be made on the following considerations; specific desires of the owner, the best interests of the government, project requirements and sound real estate practices. For planning purposes these tracts are included for acquisition.

Guide Taking Elevation Justification:

The criteria for determining the elevations used in this third group of Charles River Watershed, Natural Valley Storage areas is based on the following:

<u>NVSA</u>	<u>PERTINENT ELEVATIONS</u> (Above Mean Sea Level)	
	<u>'55 FLOOD</u> (Minimum Taking Line)	<u>'55 FLOOD + 1' or 2'</u> (Maximum Taking Line)
M	184	186
N	239	241
O	263	265
P4	240	241
3	236	237
3a	232	234
2	228	229
1	214	215
R	208	210
S	206	208

The elevation of the 1955 Flood of Record is comparable to the observed 1968 flood.

The elevations are used herein as the guide taking line for this REDM and are the 1955 flood elevations plus one or two feet but not to exceed the Standard Project Flood. The final taking line shall be based upon sound real estate practices with consideration given to the amount of additional land to be acquired above the 1955 flood elevation.

8. ESTATES TO BE ACQUIRED

It is planned that the majority of tracts for this project be acquired in fee simple to insure maximum protection of the wetland areas. In certain cases it may be in the best interests of the government and the landowners to acquire a restrictive easement in lieu of outright purchase. Easements have already been acquired over many tracts and it is anticipated that acquisition of additional easements will occur. Authority for the New England Division to acquire restrictive easements was granted by O.C.E. by 1st Indorsement dated 3 December 1976, REDM No. 3. Current acquisition experience has proven this procedure to be practical in many instances, where it was advantageous for the owner to retain fee interest in the property, while the government acquired easement rights to preserve

valuable water storage characteristics of the land in its natural state in keeping with project purposes.

9. AREAS PROPOSED FOR ACQUISITION - PRIORITY GROUP III

AREA "M" - Franklin, Ma. (Plate 3B-3)

Area "M" contains about 395 acres of low meadowland surrounding a section of Mine Brook in the northwesterly part of Franklin, near the Bellingham town line. The area is about 20 miles southwest of Boston and is reached by Massachusetts Route 140 and Route 495. The area is irregular in shape, extending in a north-south direction for about 2.3 miles with a width of about one-half mile. The area is bisected diagonally by Route 495. The land is zoned partially for industrial and partly for residential use. About 260 acres are very low and wet, while the remaining 135 acres are low, unimproved land. There are 18 ownerships, including a two-acre tract, owned by the Town of Franklin. The area for the most part lies within the Town Flood Plain (elevation 200 m.s.l.) and the uses permitted for the respective zones are consequently restricted.

AREA "N" - Franklin, Ma. (Plate 3B-4)

Area "N" is located in Franklin about two miles southeast of Area "M", southwest of the intersection of Route 495 and is bisected by the New York, New Haven and Hartford Railroad. The area contains approximately 150 acres of unimproved wet meadowland surrounding Mine Brook. About 50 acres are low undeveloped land and the remaining 100 acres are very low and wet. The railroad crosses diagonally through the area. There are 12 owners of this land, including a five-acre tract owned by the Town of Franklin. The area lies below the 241' m.s.l. elevation and is within the Town Flood Plain restriction area.

AREA "O" - Franklin and Wrentham (Plate 3B-5)

The area is located in the southern-most part of Franklin and extends southward over the Wrentham town line. The area is a "U" shaped depression, following the contour of the Miscoe Brook at the 265' m.s.l. elevation. The area consists of approximately 266 acres of low unimproved land, including about 216 acres of very low wet land. Zoning is for residential use but considerable land preparation would be required for development. There are an estimated 21 ownerships in the area. About 105 acres are in the Franklin State Forest. The area lies within the Town Flood Plain zone.

AREA "P" - Holliston and Medway (Plate 3B-6)

Area "P" is a long narrow area, surrounding the north-south course of Hopping Brook, in the Towns of Holliston and Medway. The area extends from Prentice Street, near the Hopkinton-Holliston boundary, south to Route 109 just north of West Street in Medway, a distance of about 4.3 miles. The area contains about 704 acres of low land, zoned for residential and industrial use. About 140 acres of the area are low and undeveloped, while the remaining 564 acres are very low and wet. There are an estimated 68 owner-ships in this area. About 264 acres are owned by the Town of Holliston. The land lies within various elevations ranging from 215' to 241' m.s.l. with five distinct guide taking lines.

AREA "R" - Bellingham (Plate 3B-7)

This area contains approximately 180 acres of low, unimproved land, surrounding Stall Brook. The area is located in North Bellingham about one-half mile north of the intersection of Route 495 and Route 126. About 110 acres are low and unimproved, while the remaining 70 acres are low and wet. The area lies below the 210' m.s.l. elevation. There are 13 ownerships within the area. About 15 acres are municipally-owned. The community well-field, located within this area, is not included for acquisition.

AREA "S" - Bellingham (Plate 3B-8)

This is an area of about 400 acres of low unimproved land. The area is located in Bellingham along the Charles River south of Hartford Street (Route 126) on both sides of Route I-495, which passes through the area near midpoint. The area extends southerly from Hartford Street on the north to the New Haven Railroad tracks on the south. There are estimated to be 14 private ownerships within this area. About 130 acres are low and flat, while the remainder is very low and marshy. The area is below the 208' m.s.l. elevation. Most of this area lies within the Bellingham Flood Plain.

10. ZONING

Zoning in the subject areas varies from rural residential to industrial. For the most part the subject lands are located within the flood plain districts and wetland areas of these towns. Because of superimposed flood plain zoning and wetland restrictions over these zoned areas, most of the areas are limited concerning permitted uses. In some cases however, the land may be developed by special appeal procedures. The following is a brief zoning description for each area:

AREA "M" is zoned for rural residential use, industrial use and a small area for business use. The flood plain control elevation for Franklin at this location is 200 feet above mean sea level. The proposed guide taking elevation of 186 feet m.s.l. lies entirely within the town flood plain area and is, therefore, subject to the flood plain restrictions.

AREA "N" is zoned for industrial use and lies mostly within the Town of Franklin flood plain. Two flood plain control elevations have been established within this area, 240 feet m.s.l. on the north side of the railroad and 250 feet m.s.l. on the south side.

AREA "O" is zoned for rural residential use and the proposed guide taking elevation of 265 feet m.s.l. is all within the Franklin flood plain control elevation of 280 feet above m.s.l. In Wrentham, Area "O" lands are zoned for agricultural-residential use and the town does not impose flood plain zoning restrictions upon its wetlands.

AREA "P" extends north and south along Hopping Brook in Holliston, extending south into Medway. Zoning in Holliston is for agricultural-residential and industrial use. Holliston enforces State wetland restrictions, which include lands along Hopping Brook. Medway lands included in Area "P" are also zoned for agricultural-residential use but there is no flood plain zoning.

AREA "R" lands, which are located in north Bellingham, are zoned for industrial use and for agriculture. Flood plain restrictions have not been adopted in this area.

AREA "S" - The lands which comprise area "S" are zoned for industrial and agricultural use, and are in the flood plain of the Town of Bellingham. Flood plain elevations have been established along the Charles River as follows:

Maple Street south to Route 495	205' m.s.l.
Route 495 south to High Street	210' m.s.l.
High Street south to N.Y., N.H. & H. R.R.	215' m.s.l.

The proposed guide taking line elevation of 208 feet m.s.l. includes much of the land included in the town flood plain area.

11. ENVIRONMENTAL EVALUATION

An environmental evaluation has been conducted by NED Planning Division, Environmental Analysis Branch. As a result of that study, it was concluded that implementation of this land acquisition

program will have no effect upon the environmental status of the areas involved other than to provide protection against development of said lands. Acquisition of these wetlands, therefore, would have only a beneficial effect upon the Charles River Watershed Area. (See Subject "L", Paragraph 23.26, GDM, July 1976). In compliance with the National Environmental Policy Act of 1969, a draft of the final version of the Environmental Impact Statement with comments was submitted to the President's Council on Environmental Quality on 14 August 1972. No adverse comments have been received.

12. WATER RIGHTS

Lands that are acquired in fee simple will include any pertinent water rights. Restrictive easements will not affect any riparian interests, which the owners may have in their properties and they will continue to enjoy access to the water and any other uses, which will not interfere with the terms of the easements.

13. MINERAL DEPOSITS AND CROPS

A field inspection revealed no commercial mining of gravel, marketable stands of timber, agricultural crops, or other minerals within the lands to be acquired in areas "M", "N", "O", "P", "R", and "S". If subsequent investigation discloses any active gravel mining property, it will not be acquired.

14. GOVERNMENT/MUNICIPAL-OWNED FACILITIES

Section 111 of the Act of Congress approved 3 July 1958 (Public Law 85-500) authorizes the protection, alteration, reconstruction, relocation or replacement of Government/Municipal-Owned facilities. No improved properties will be acquired for this project. The land areas included in this report do not include Municipal and State water and sewerage facilities, located within subject areas nor does it include any portions of Lincoln Cemetery or the Bragg Cemetery land in Holliston. There are no other Government/Municipal-Owned facilities located within these areas.

15. PROTECTION AND ENHANCEMENT OF CULTURAL ENVIRONMENT

In accordance with instructions set forth in teletype DA (DAEN) R 191306A, dated October 1971, Subject: "EO11593, 13 May 1971, Protection and Enhancement of Cultural Environment"; a study has

been made in the subject areas. The study revealed that no local, State, Federally-owned, nor Federally-controlled property of historical significance would fall within the provisions of EO 11593.

16. ESTIMATED TAX LOSS

A review of the town tax assessment records of the properties to be acquired indicates that communities will incur some tax loss because of the proposed Federal Acquisition. The amount of tax loss to the communities, caused by the real estate takings of the low wetlands for the towns within the Priority III Areas, is estimated as follows:

TABLE 1

TAXABLE LAND VALUATION AREAS M, N, O, P, R, & S

	<u>Estimated 1978 Tax (Rounded)</u>
<u>AREA M</u>	
Franklin	\$10,500
<u>AREA N</u>	
Franklin	4,000
<u>AREA O</u>	
Franklin	3,000
Wrentham	500
<u>AREA P</u>	
Holliston	3,000
Medway	3,000
<u>AREA R</u>	
Bellingham	3,500
<u>AREA S</u>	
Bellingham	<u>6,500</u>
TOTAL	\$34,000

TABLE 2
RECAPITULATION BY TOWNS

<u>TOWN</u>	<u>Estimated 1978 Tax (Rounded)</u>
Franklin	\$17,500
Wrentham	500
Holliston	3,000
Medway	3,000
Bellingham	10,000
Total	<u>\$34,000</u>

Reimbursement under Massachusetts General Laws (Chapter 58, Section 17B) entitled, "Property Taken for Flood Control, Loss of Taxes, Reimbursement", refers to reimbursement to towns for the loss in taxes, as a result of property taken for flood control reservoirs. Under Chapter 858, Section 5, Massachusetts Acts and Resolves of 1977, approved December 23, 1977, the provisions of Chapter 58, Section 17B of the General Laws apply to property taken for the Natural Valley Storage Project.

17. MANAGEMENT OF THE WETLANDS

The Division Engineer has requested the Commission of the Department of Environmental Management, Commonwealth of Massachusetts, for assistance in establishing an advisory group to resolve questions, concerning the use and management of the lands to be acquired. These questions involve compensation to towns for lands and taxes lost for the benefit of downstream communities, as well as the possibilities for passive recreational uses within the wetland areas. The Metropolitan Area Planning Council through the Natural Valley Storage Project Management Committee has evolved two plans for management. One plan would permit the Massachusetts Division of Fisheries and Wildlife to become management agent. The alternate plan endorsed a multiple management arrangement, whereby the individual towns through the Board of Selectmen, would manage the areas within their jurisdiction in cooperation with the Corps of Engineers. The selected plan probably will be determined by the degree of contiguity achieved by the Corps' acquisition program. The Commonwealth of Massachusetts Division of Fisheries

and Wildlife prefers an area approximating 500 contiguous acres. Adjacent Commonwealth lands would be considered to supplement Government-owned areas of less than 500 acres. Adjoining lands of the Massachusetts Audubon Society and Trustees of Reservations would also be compatible with Commonwealth plans in management of Government-owned lands.

18. HIGHEST AND BEST USE

Generally, the present uses of the lands located within the proposed project areas are considered to be their highest and best use. The areas affected by the proposed acquisition program are low and wet lands that contribute to conservation and natural flood protection.

19. LAND COSTS

Land values have been estimated by the market data or comparable sales approach. This approach to value is premised upon comparison between the property to be acquired and recent sales of comparable lands in the general vicinity. For purposes of this report, the gross land values presented in the project recapitulation of real estate costs were estimated on average unit values. Detailed appraisals will be made to estimate the value of each parcel for the interest to be acquired. Experience to date indicates that the loss in value caused by restrictive easements is considerably less than the fee value. For purposes of this report loss in value caused by the imposition of a restrictive easement is estimated to be nominal. These values have been estimated separately.

Land Costs (Fee and/or Restrictive Easements): \$965,000.

20. ACQUISITION COSTS

Acquisition costs include mapping, survey, legal descriptions, title evidence, appraisals, negotiations, closings and administrative costs for possible condemnation. The number of ownerships in the proposed areas as of 1 June 1978 were estimated from local assessor's maps, copies of deeds, and from real estate tract maps. Ownerships and acquisition costs are estimated for each area and are summarized as follows:

Area "M"	18 Ownerships @ \$2,000	= \$ 36,000
Area "N"	12 Ownerships @ \$2,000	= 24,000
Area "O"	21 Ownerships @ \$2,000	= 42,000
Area "P"	68 Ownerships @ \$2,000	= 136,000
Area "R"	13 Ownerships @ \$2,000	= 26,000
Area "S"	14 Ownerships @ \$2,000	= 28,000
TOTAL ESTIMATED ACQUISITION COSTS		\$292,000

21. RESERVATION BOUNDARY SURVEYS AND MARKINGS

Current regulations require the boundary marking of all Government Reservations. Based on the most recent contract issued by this office for this type of work, survey costs for marking the boundary lines of the subject areas are estimated at \$3,500 per mile.

Area "M"	12 Miles	\$ 42,000
Area "N"	6 Miles	21,000
Area "O"	8 Miles	28,000
Area "P"	19 Miles	66,500
Area "R"	5 Miles	17,500
Area "S"	12 Miles	<u>42,000</u>
TOTAL BOUNDARY SURVEYS AND MARKING COSTS		\$217,000

22. RELOCATION ASSISTANCE

Public Law 91-646, Uniform Relocation Assistance and Real Property Act of 1970 provides for uniform and equitable treatment of persons displaced from their homes, businesses or farms by Federal or Federally Assisted Programs. No displacement or relocation of property owners will occur under the proposed acquisition, as developed areas have been excluded from the proposed acquisition. Relocation assistance costs include mainly reimbursement of expenses incidental to transfer of title under Section 303 of the Act. These costs have been estimated for each area as follows:

Area "M"	\$ 4,500
Area "N"	3,000
Area "O"	5,250
Area "P"	17,000
Area "R"	2,000
Area "S"	<u>3,500</u>
TOTAL RELOCATION ASSISTANCE COSTS	\$35,250

23. SEVERANCE DAMAGES

Severance damages sometimes occur, where partial takings are acquired and when the remaining portion may not be subject to full economic development. The severance damages are measured and estimated on the basis of "Before and After" appraisal methods and will reflect

actual losses incurred by remainders, as a result of partial acquisition.

It is planned to follow good sound real estate acquisition practices so that damages of this nature will be negligible. Based upon a study of the proposed takings, severance damages are considered to be minimal and for purposes of this report are estimated to be \$ - 0 -.

24. CONTINGENCIES

A contingency allowance of 20 percent is considered reasonable to provide for possible appreciation of property values from the date of this report to the acquisition date, possible minor property line adjustments, hidden ownerships which may develop, adverse condemnation awards and to allow for actual, practical, and realistic negotiations pursuant to existing regulations.

25. REAL ESTATE COSTS SUMMARY

The following is a summary of the estimated real estate costs for the Charles River Watershed Natural Valley Storage area project - Priority Group III Areas "M", "N", "O", "P", "R", and "S".

Land Costs	
(Fee and/or Permanent Restrictive Easements)	\$965,000
Relocation Assistance (PL 91-646)	35,250
Severance Damages	- 0 -
Acquisition Costs	292,000
Boundary Surveys and Markings	217,000
	Subtotal
	\$1,509,250
Contingencies (20% of \$1,509,250)	301,850
	TOTAL ESTIMATED REAL ESTATE COSTS
	\$1,811,100
	CALLED
	\$1,800,000

26. LAND ACQUISITION SCHEDULE

Present plans call for initial real estate acquisition for Priority Group III to commence in October 1978. Acquisition is planned to proceed as expeditiously as possible, following area priorities.

27. RELOCATIONS

In accordance with our normal practice, properties will be acquired subject to existing easements for public roads and highways, public utilities, railroads, and pipelines. A preliminary investigation revealed that there were no cemeteries within the project areas. Since there is no construction involved in this project, no relocations are contemplated.

28. TRACT REGISTER

Real estate maps, surveys and property maps are currently being prepared. Title searches are underway and it is expected that there could be some minor changes in property lines resulting therefrom. Specific tract and ownership data are not complete at this time. Preliminary maps are included in this report for descriptive locations of the areas.

29. CONCLUSIONS AND RECOMMENDATIONS

The areas to be acquired, as set forth in this report, are considered to be reasonably accurate. The final determination of the lands to be acquired within the scope of the proposed land acquisition program will be predicated upon survey and detailed field investigations and careful studies of each ownership. Refinement or adjustment of the taking lines also will depend upon the best interest of the Government, sound real estate practices, topographic conditions, and owners' desires.

Project acquisition plans are based on the premise that no buildings or other improvements situated within the subject areas will be acquired nor will access be denied to these improvements. During the real estate study, public records were reviewed, many knowledgeable persons including town officials, and personnel from the Massachusetts Division of Environmental Management were contacted and interviewed. Many sales of properties, considered comparable to the lands affected by the proposed acquisition, were noted and compared to the subject sites.

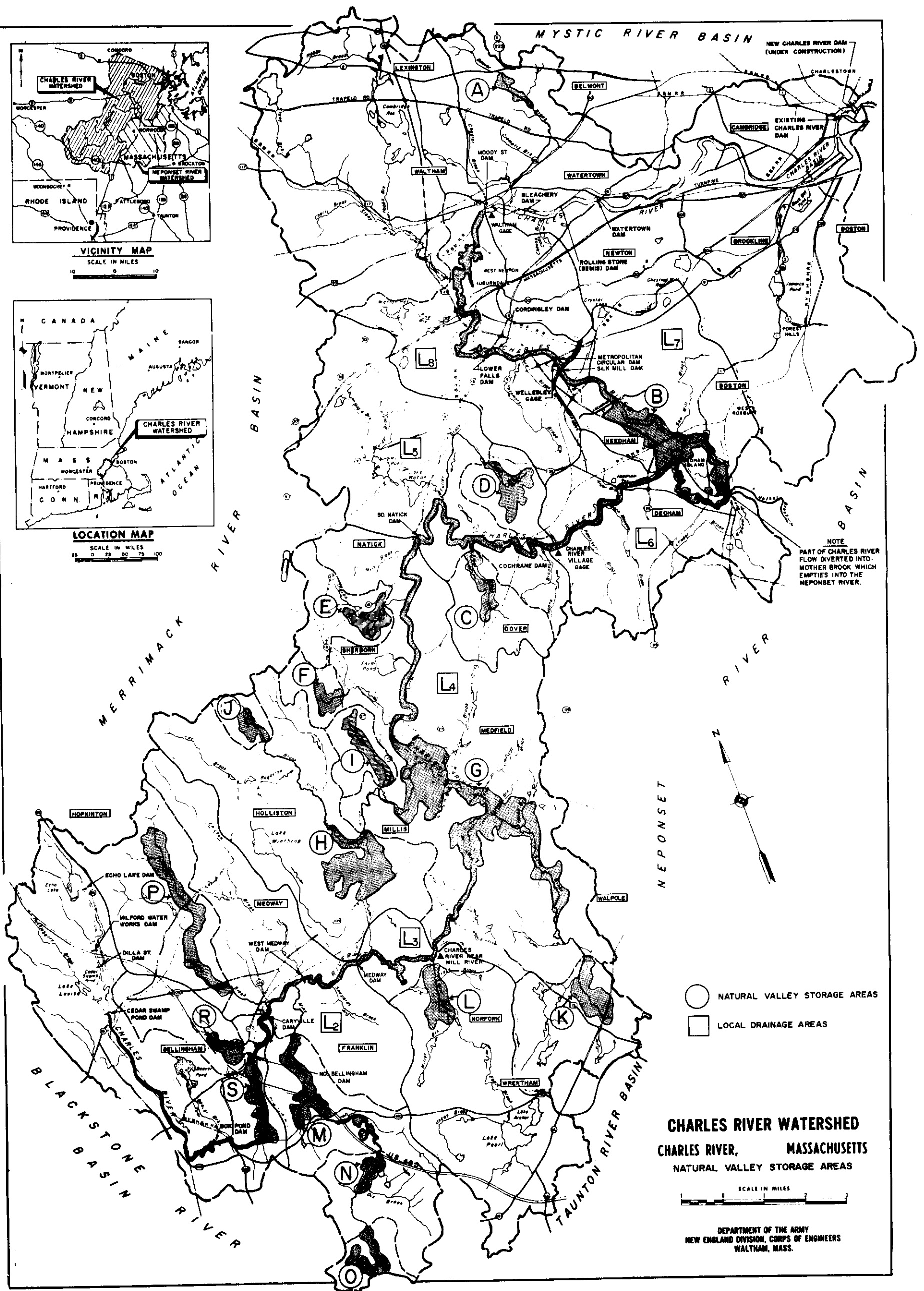
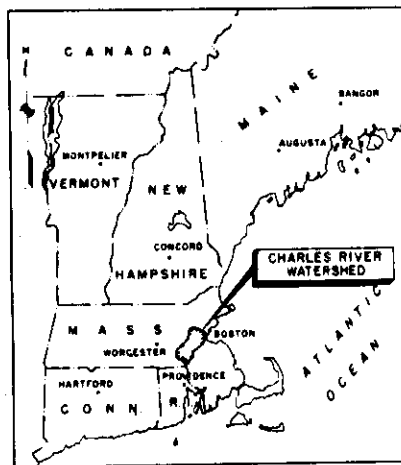
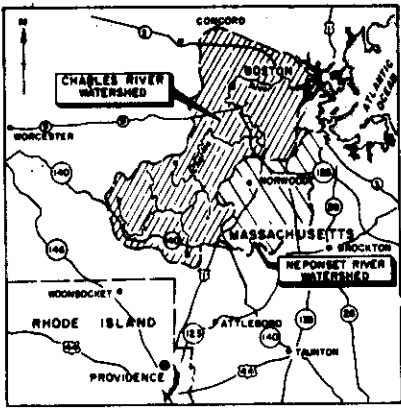
The real estate study and investigation included on-site inspection of each of the six subject areas to determine the type of lands involved, physical characteristics and their highest and best use. Consideration was given to all items which might have an influence on the final real estate costs.

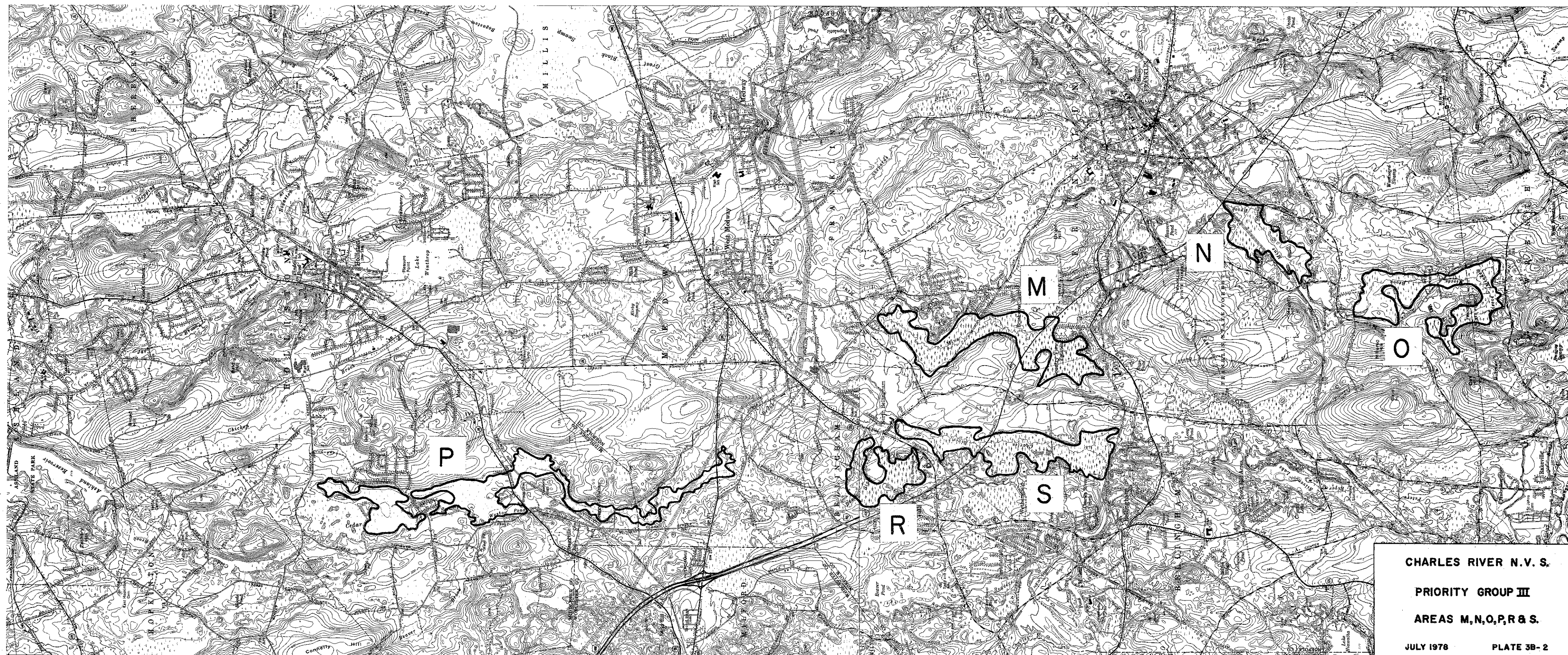
As a result of the foregoing, it is estimated that the total real estate cost for Priority Group III - Areas "M", "N", "O", "P", "R", and "S" is:

One Million Eight Hundred Thousand Dollars (\$1,800,000)

The lands included in this group comprise approximately 24 percent of the total project and about 29 percent of all ownerships.

It is recommended that this report be approved and that the New England Division Engineer be authorized to acquire said lands, subject to possible changes and minor variations, as determined necessary prior to acquisition.





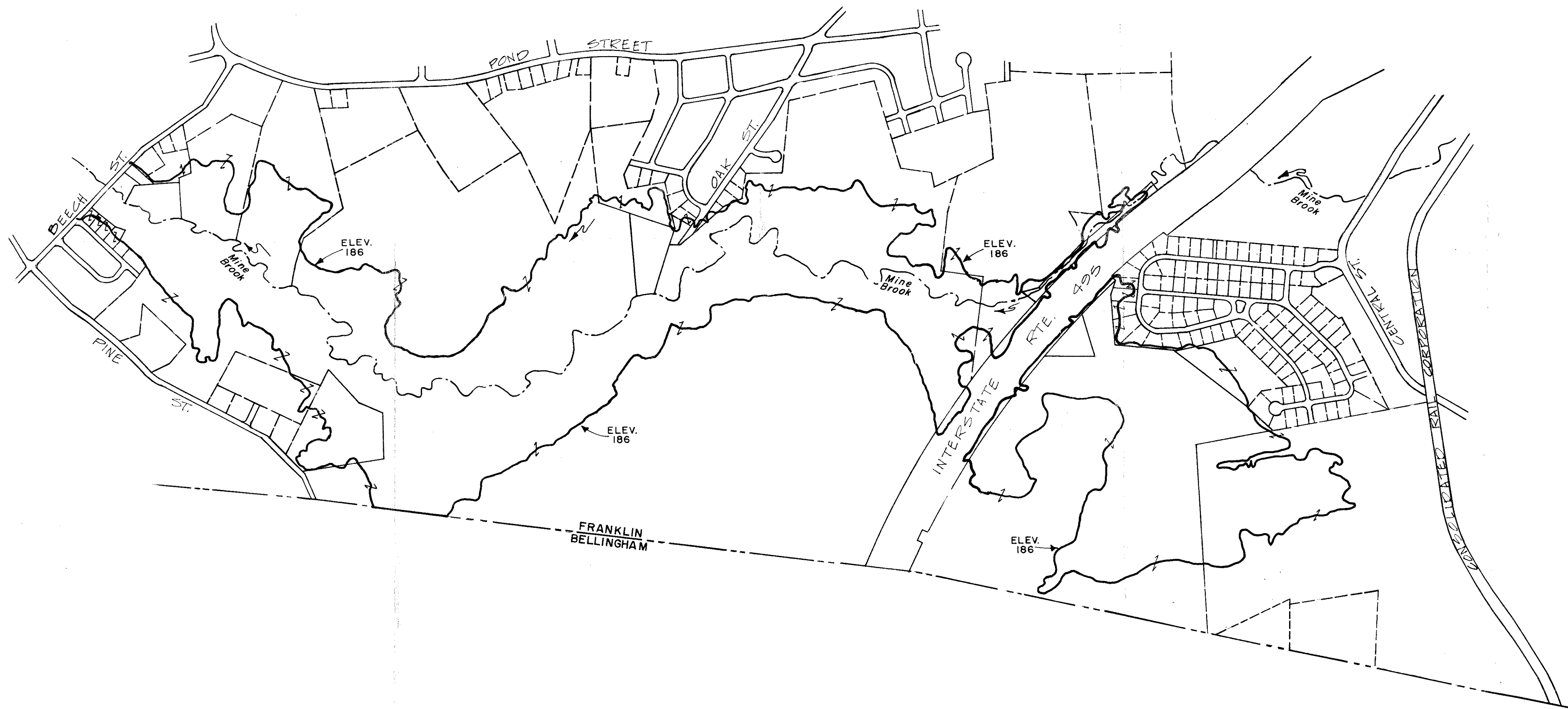
CHARLES RIVER N.V. S.

PRIORITY GROUP III

AREAS M,N,O,P,R & S.

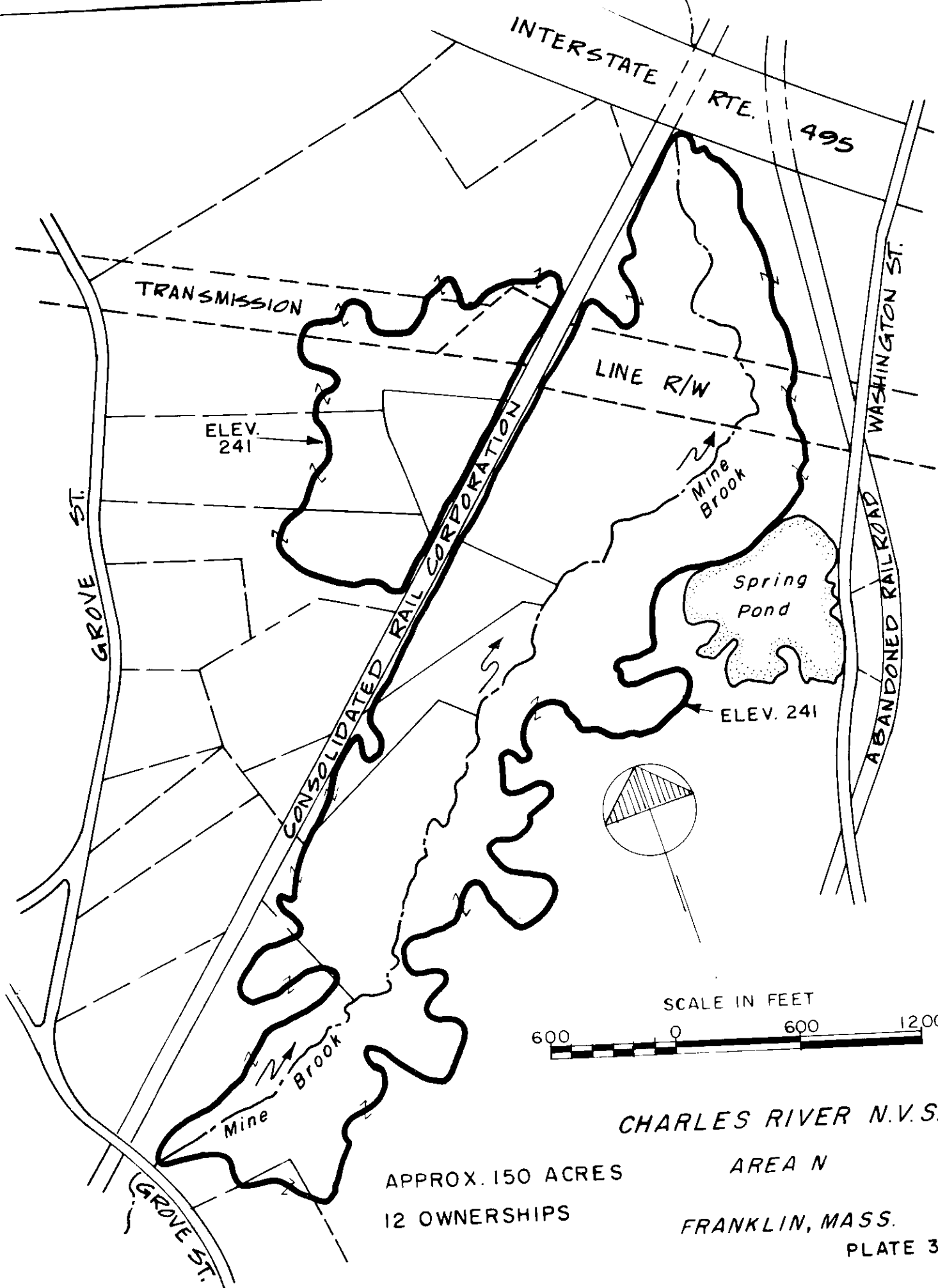
JULY 1978

PLATE 3B-2



APPROX. 395 ACRES
18 OWNERSHIPS

CHARLES RIVER N.V.S.
AREA
FRANKLIN, MASS.



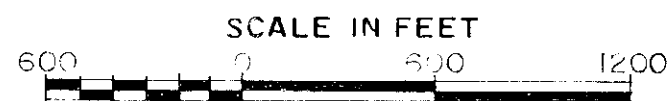
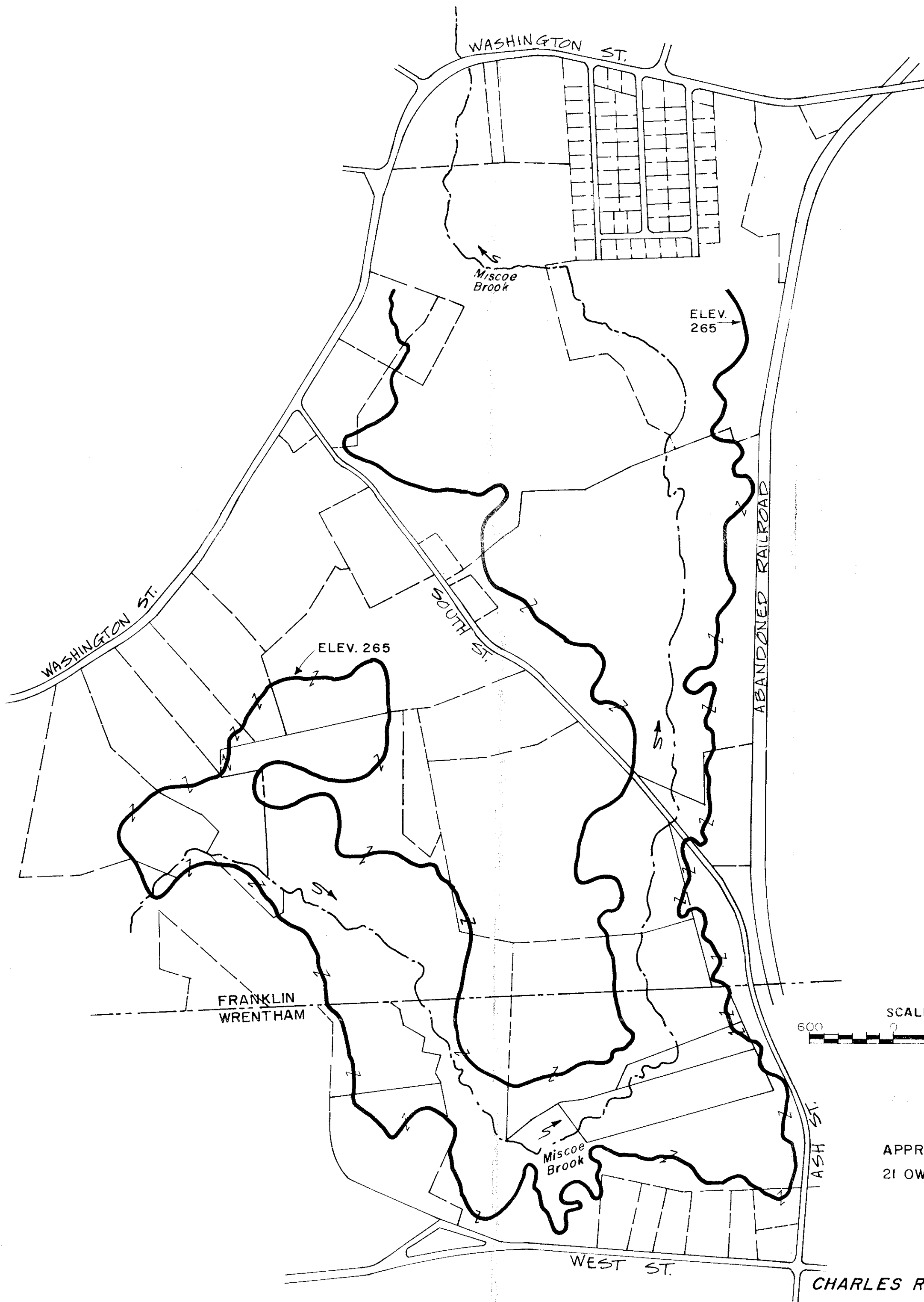
APPROX. 150 ACRES
12 OWNERSHIPS

CHARLES RIVER N.V.S.

AREA N

FRANKLIN, MASS.

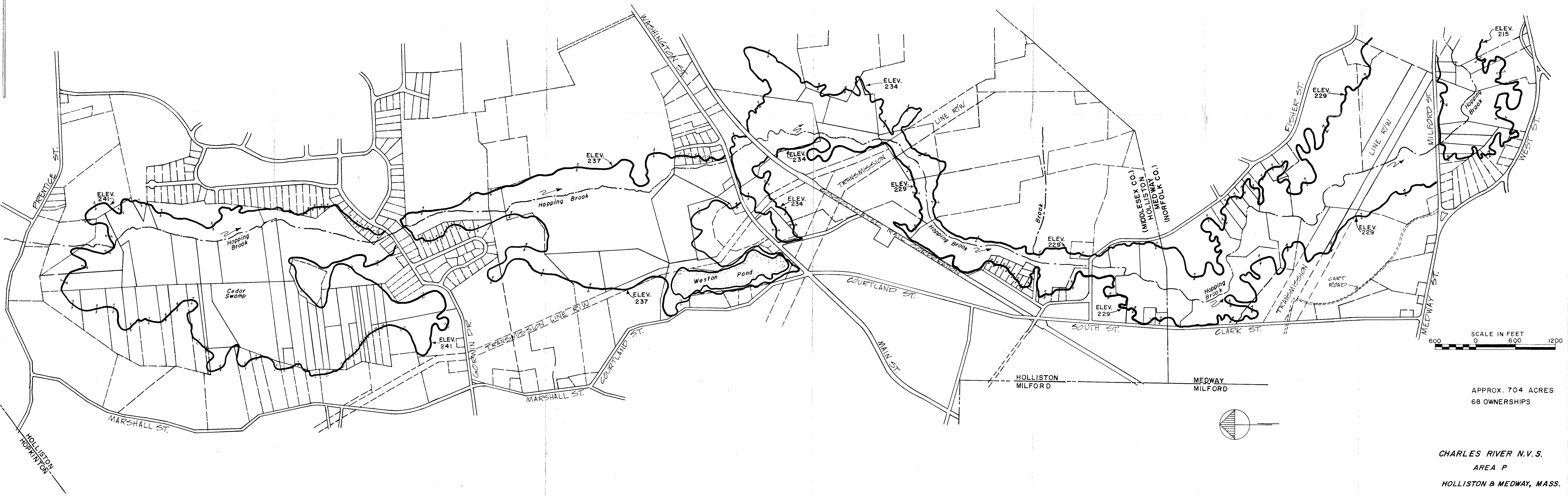
PLATE 3B-4

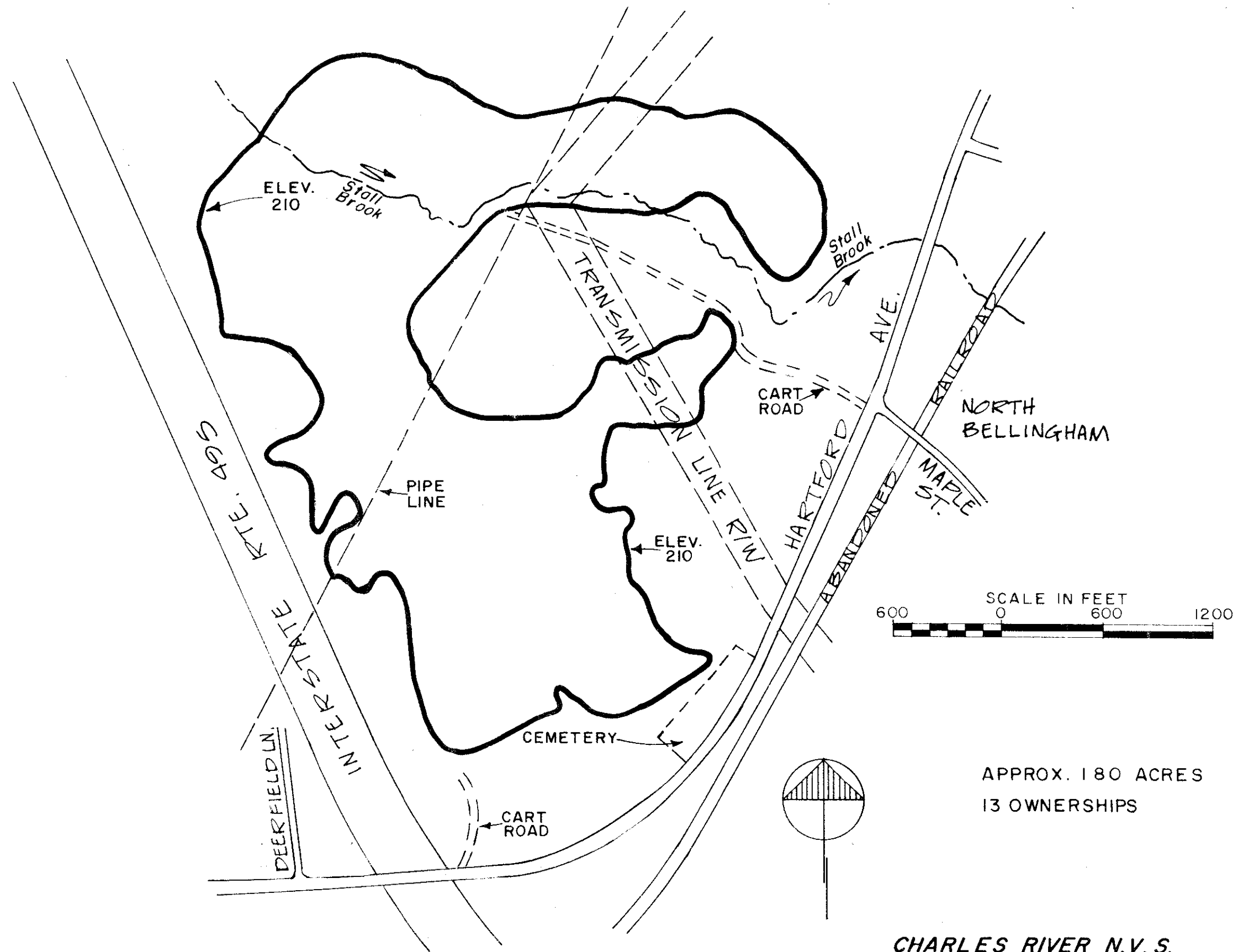


APPROX. 266 ACRES
21 OWNERSHIPS

CHARLES RIVER N.V.S.
AREA 0

FRANKLIN & WRENTHAM, MASS.





APPROX. 180 ACRES
13 OWNERSHIPS

CHARLES RIVER N.V.S.
AREA R
BELLINGHAM, MASS.

